

Rev. C. W. Schürmann (27) states, "the natives of Port Lincoln are not so expert in procuring fish as those of other parts of the Colony, for they neither use nets nor hooks". Apparently he was under the impression that the natives of other parts of the South Australian Colony used hooks. This false impression is dispelled by Rev. G. Taplin (31), who says, "The Narrinyeri were not acquainted with fishing by means of hooks before the white man came. They soon learned to appreciate this method, and made native lines to use with European fish hooks". Rev. H. E. A. Meyer (19), speaking of the same tribe, states, "Before the arrival of the Europeans they had two modes of catching fish, with net and the spear, to which must now be added the hook and the line, which they have learned of the Whites". Dr. Erhard Eylmann, in *Die Eingeborenen der Kolonie Südaustralien*, says, "Den Stämmen, mit welchen ich in Berührung gekommen bin, sind, wie schon früher erwähnt, Fischangeln unbekannt" (as already mentioned, the tribes with whom I have been in contact do not know fish hooks).

However, listed in the Guide to the Australian Ethnological Collection issued by the National Museum of Victoria in 1922, is a hook, made of the margin of a bivalve, to which is attached a short length of sinew. It is labelled Port Lincoln, South Australia, and was purchased in 1902 from a Mr. C. Richards who sold to the Museum his entire collection of weapons and implements from all parts of Australia. However, the Curator of Molluscs of the National Museum, Miss J. Hope Macpherson, who has examined this hook, states that the mollusc belongs to the species *Alathyria perterta*, Iredale, which occurs in the rivers of southern Queensland, and not in South Australia.

In this connection, it may be as well to mention here that W. E. Roth (25) states, "I learnt that these Cape Grafton blacks also manufacture hooks from a fresh-water shell, not yet scientifically examined by me, with the local name of *chiberi*". This should effectively dispose of the claim for a South Australian fish hook.

Crossing into western Victoria the evidence is still negative. Supporting this, Dawson (7) says, "Fish are caught in various ways, but the idea of a hook and line never appears to have occurred to the natives of the Western District". And the testimony, for what it is worth, of W. Buckley, the Wild White Man from Corio Bay, that the natives used no hooks, but large earth worms strung on long grass, which acted as gorges when swallowed by the fish (E. W. Cole, edit. 1889), tends to support this.

### THE MUDUKS

Before we discuss the fish hook proper, as occurring on the eastern sea-board, we must take notice of the implement known as *muduk* in Australia.

As can be seen from the illustration it is a piece of bone, circular in cross section, pointed at each end. When fastened sub-parallel to a line, baited, and swallowed by the fish, it is almost impossible to remove it. *Muduks* are of considerable antiquity, having been described by Sollas (29)

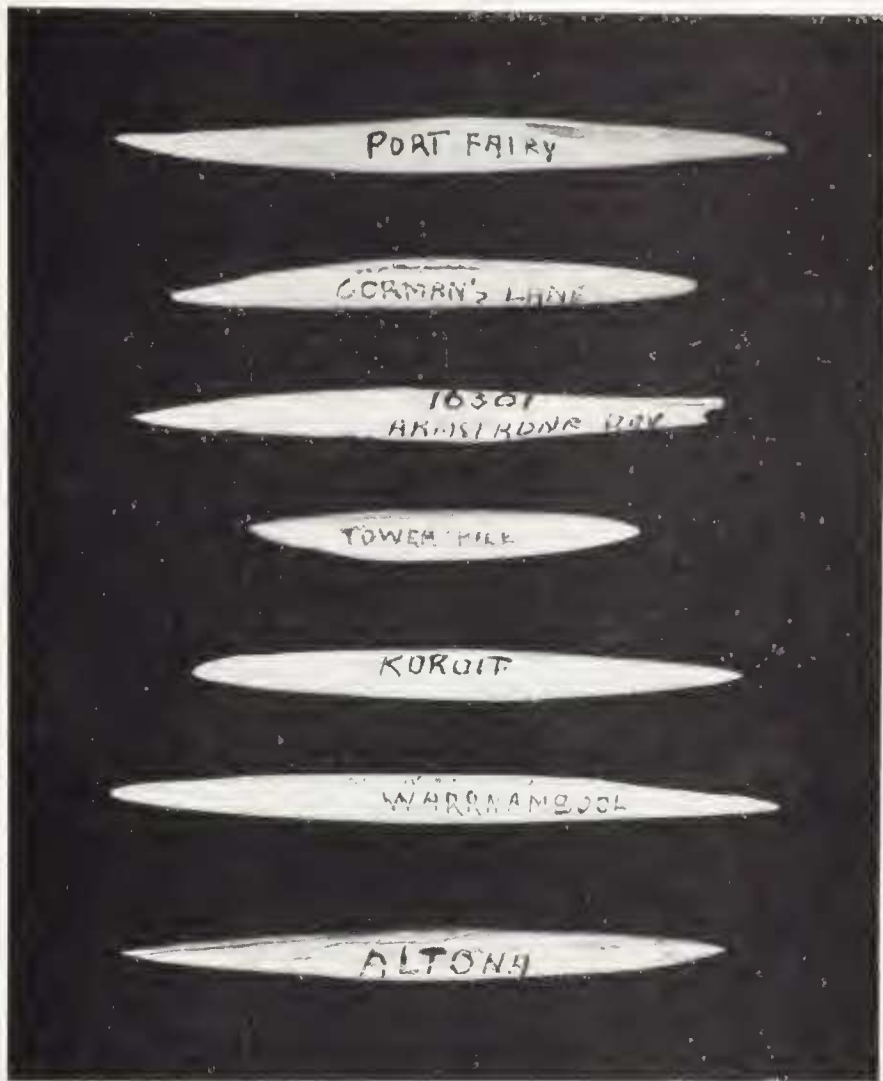


Plate No. 1, *Muduks*, Victorian Sites. (Natural size.)

as being used by the Magdalenians. They are often found in the Swiss Lake Dwelling sites, and occur in numbers amongst the Maglemosian remains along the Baltic coast. They are present in the prehistoric Toalian Culture of the Celebes and southern Java (McCarthy (20)). In Australia they are only found archaeologically, and are "Collected on kitchen middens along the coast of New South Wales and Victoria" (McCarthy (20)). Hale and Tindale (11), in describing some they found during excavations at Devon Downs on the Lower Murray, "attached a line to one, in the

manner illustrated by Brough Smyth. It is worthy of note that slight grooves are present on the edges of the bone where encircled by the string”.

The Victorian occurrences of *muduks*, as far as the writer has been able to determine from specimens in the collections of the National Museum of Victoria, and other undoubted sources, are: Warrnambool, Koroit, Port Fairy, Tower Hill beach, Armstrong Bay, Gorman's Lane (the latter three being in the same general locality), Shelford, Geelong, Altona, Brighton Beach and Frankston. The Geelong record is illustrated by Brough Smyth (28), and his description, or rather that of his informer, Mr. J. A. Panton, “That the natives of the Geelong district used in former times” does not necessarily mean at the time of the coming of the white man.

McCarthy (20) claims that the principal use of *muduks* was for “dual spear point and barb”. That some of the longer double-pointed bones, especially those of flattened-oval cross section, were used as such is evident by extant spears. However, the shorter, rounder ones must have been used primarily, if not solely, as fish gorges, judging by their use as such in other parts of the world. For example we have:—

- |               |  |   |
|---------------|--|---|
| In America.   | Amongst the Eskimo (Sollas (29)).                                    |   |
|               | Northern and Central California (Ross (22)).                         |   |
|               | British Guiana (W. E. Roth (26)).                                    |   |
| In Africa.    | Gambia   | } Lagercrantz, Riksmuseets Etnografiska<br>Avdelning — Smarre Meddelanden No. 12. |
|               | Lower Congo  |   |
|               | Madagascar   |   |
| In Melanesia. | New Guinea (Hamilton (12)).  |   |
|               | Santa Cruz, Banks Islands, Malaita in the Solomons (Codrington (3)). |   |
| Indonesia.    | Celebes (Hickson (14)).  |   |
|               | Borneo (Gruvel in La Peche).   |   |
| Polynesia.    | Samoa (Williams in Missionary Enterprise).                           |   |
|               | New Zealand (Hamilton (12)).   |   |
| Micronesia.   | The Gilbert Group (Specimen in the British Museum).                  |   |

The material used in these gorges is not always mammalian bone, but sometimes fish bone, turtle shell, palm spine or wood. It is worthy of note that in most places where fish gorges are used, they are attached by the middle and not double hitched. No fish gorges of any substance other than bone have been recorded for Australia. However, Tindale, in a recent letter to the writer, states, “On checking my note books I find that my data on the wooden *muduk* came originally to me in March 1932 from a Mr. Arthur White, a very old resident of Murray Bridge, who volunteered information that the native fish hook among the aborigines of the Murray River was a double pointed piece of hardwood approximately 3 cms. in length, and 0.6 cm. in diameter at the middle, where it had a slight groove

or constriction. It tapered off to a blunt point at each extremity. The fishing line was securely tied about the middle of the toggle. When the Murray Cod took the bait a sharp jerk caused the peg to assume a transverse position in the jaw of the fish”.

The full range of distribution of *muduks* in this country is not known.

### A VICTORIAN FISH HOOK

The only fish hook recorded from Victoria and known to the writer is in the collection of the National Museum, where it has been since 1888. It is figured by Brough Smyth (28). He recorded it as having been obtained by a Mr. Bulmer, and of having formerly been used by the natives of Gippsland. This Mr. Bulmer, the Rev. J. Bulmer, was once a Missionary at Yelta, and for many years in charge of the Station at Lake Tyers, in Gippsland. The hook is made of bone (mammalian), and of the crescentic shape common in New South Wales. According to Brough Smyth (28), the cord attached to it is made of the bark of the Lightwood, called by the natives *yowan*. On page 202 of Vol. I. of his “Aborigines of Victoria” he states: “Catching fish by the hook and line was not practised by all the natives of Victoria. In Gippsland, however, they used hooks made of bone; and an ancient fish hook of bone, obtained from Gippsland, is figured in this work. Mr. Green says that the natives of the Yarra were unacquainted with the hook. Meyer and Taplin and Wilhelmi state that it was not used in South Australia until after the arrival of the Europeans; nor is it known on the Paroo (A. F. Sullivan Ms.). But the natives of Victoria, in some parts certainly—if not in the Western District, most assuredly on the Eastern Seaboard—were accustomed to make fishing hooks and lines. The Western Port blacks named the fish hook *ling’an-ling’an*—but perhaps they derived the invention and were taught its uses by the Gippsland natives . . . The hooks were not in all parts of the same shape as those that somewhat resemble European hooks. They appear to have sharpened pieces of wood in such a manner as when hitched to twine and baited would secure the larger kinds of fish.” The same author tells us (Vol. I., p. 391), “The women (i.e., of Gippsland) are expert anglers. They will sometimes secure as much as 60 lbs. weight of fish with the modern hook. But what was the measure of their success when they used the bone, wooden or shell hook is not known to me”.

Brough Smyth, while a careful recorder, was not an observer. He does not always appear to be certain of his statements. He states, for example, that the Gippsland natives had bone fish hooks, because he had one which was said to have come from there. Then he says other tribes used other kinds, but does not tell us anything definite about them. He records the name *ling’an-ling’an* used for fish hooks by the Western Port natives, but is not certain that they were not introduced there by the Gippsland blacks.

Regarding the use of *ling'an-ling'an*, it is as well to mention that the same natives also had a name for boots, *geenong-alook*, for trousers, *thorong-alook*, for gloves, *myrnong-alook*, for hat, *cobbera cowong* (D. Bunce, Australasiatic Reminiscences, Melb., 1857). Surely, no one will suggest that the natives were familiar with these articles before their introduction by the white man.

Nor does Howitt (15) clarify the position. He writes, "In the old time the Kurnai made fish hooks of bone, and it was the province of the women to fish with the lines. The fishing lines were made of the inner bark of the Blackwood (*Acacia melanoxylon*)" and he cites as his authority the Rev. J. Bulmer.

It seems clear that the hook figured by Brough Smyth is the one with which the Rev. Bulmer influences both the above writers. But due to the proximity of Lake Tyers to the New South Wales border, the hook in question could have been brought there by a New South Wales native, or obtained in exchange from one. The fact that, to the writer's knowledge, no fish hook files have been found in Victoria would strengthen this view.

In addition, there are the details of the two accounts of the journey of the Chief Protector for Aborigines, G. A. Robinson, who, in 1844, headed the first party from Melbourne to the Gippsland Lakes. The first account, given by Haydon (13) mentions the great skill displayed by the aborigines of the Lakes in fashioning their weapons, fish hooks, etc., while concerning the style of fishing he states, "In the day the mode of fishing is generally with fish hooks made of bone". The second account, published by George Mackaness in 1941, is from G. A. Robinson's original manuscript, "Their mode of taking fish is by net, spearing and line and hook, the latter ingeniously made from bone".

This would lead us to suppose that the Gippsland natives, or at least those living on the Lakes, were acquainted with fish hooks. Did they make them, or did they obtain them from further east? In the same account Robinson states that he wished to communicate with the natives, but neither his Melbourne blacks, nor any living with the settlers could speak their language, but felt sure that a communication might readily be effected through the Twofold Bay natives "with whom the Gippsland Aborigines were in communication"; and in a marginal note he adds, "And which proved to be the case". Whether they exchanged them, or made them on the spot is immaterial. We must credit the natives of the far east of Victoria with a definite knowledge of fish hooks.

#### FISH HOOK FILES

Writing in 1932, Thorpe (33) gave a detailed history of the fish hook file as found in New South Wales. He then gave their distribution as "over a range exceeding 300 miles of coast line, namely, from Port Stephen

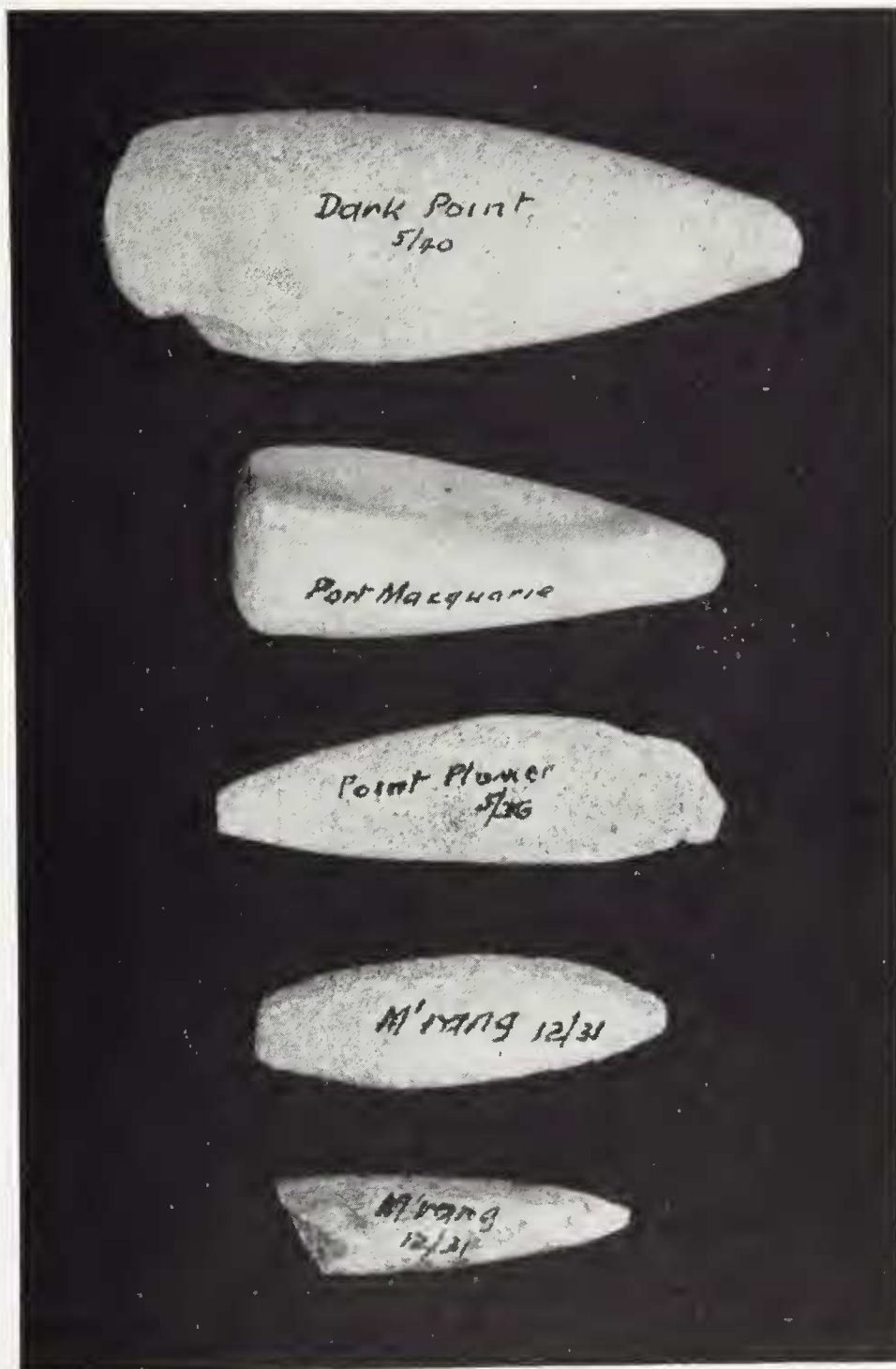


Plate No. 2, Fish Hook Files, N.S.W. Sites. (Natural size.)

to Bermagui" and "No doubt they extend further, especially to the north, until the coral region is reached". The present writer is not aware of any having been found since outside this range.

Coral files are mentioned as seen in use by Roth (25), and Banfield (1). While a proof of the use of fish hooks in the localities where they are recorded, fish hook files do not help us materially in lengthening the range of distribution of fish hooks.

### FISH HOOKS

Fish hooks formerly used along the eastern seaboard of Australia are similar in shape to those used by the Tahitians. The material employed is generally dictated by the material available. For example, we find that in southern parts, shell is more commonly used, while turtle shell is made use of in northerly districts. The technology of their manufacture has been fully described by such competent writers as W. E. Roth (25) and Banfield (1). The process involved the chipping of the edges of the shell until it was roughly circular. A hole was then burned in the centre (Cape Grafton), or drilled with a piece of quartz (Keppel Island), or chipped (Dunk Island). The hole was then gradually made larger by filing with a fish hook file or a pencil of white coral, or the terminal of a staghorn coral. A segment of this circle was then cut away, leaving a crescent. It was then rubbed down on a stone rubber till the desired shape and sharpness was obtained.

Moving north along the coast from Lake Tyers we have a definite record from Twofold Bay just north of Cape Howe, which marks the Victorian-New South Wales border. This hook, which was in the possession of A. S. Kenyon, and which the writer remembers quite well, was of the shell crescent type. The hooks of this type were made from a black lip or a gold lip mother of pearl shell and when these were not obtainable, from the hammer oyster. Unfortunately, the present whereabouts of this Twofold Bay hook of Kenyon's is not known to the writer. The next record is of a fish hook file from Bermagui, just north of Twofold Bay. As Thorpe (33) wrote, "This is the most southerly point from which a fish hook file has been recorded. It is not a solitary find, as in the immediate vicinity other files have been found, so it is apparent that the manufacture of fish hooks was one of the industries of the inhabitants of this district".

The first historical mention of an Australian fish hook occurs for the next locality—Botany Bay. Here Captain Cook landed on the 28th of April, 1770. In his diary for May 5th, there is the entry "They (the

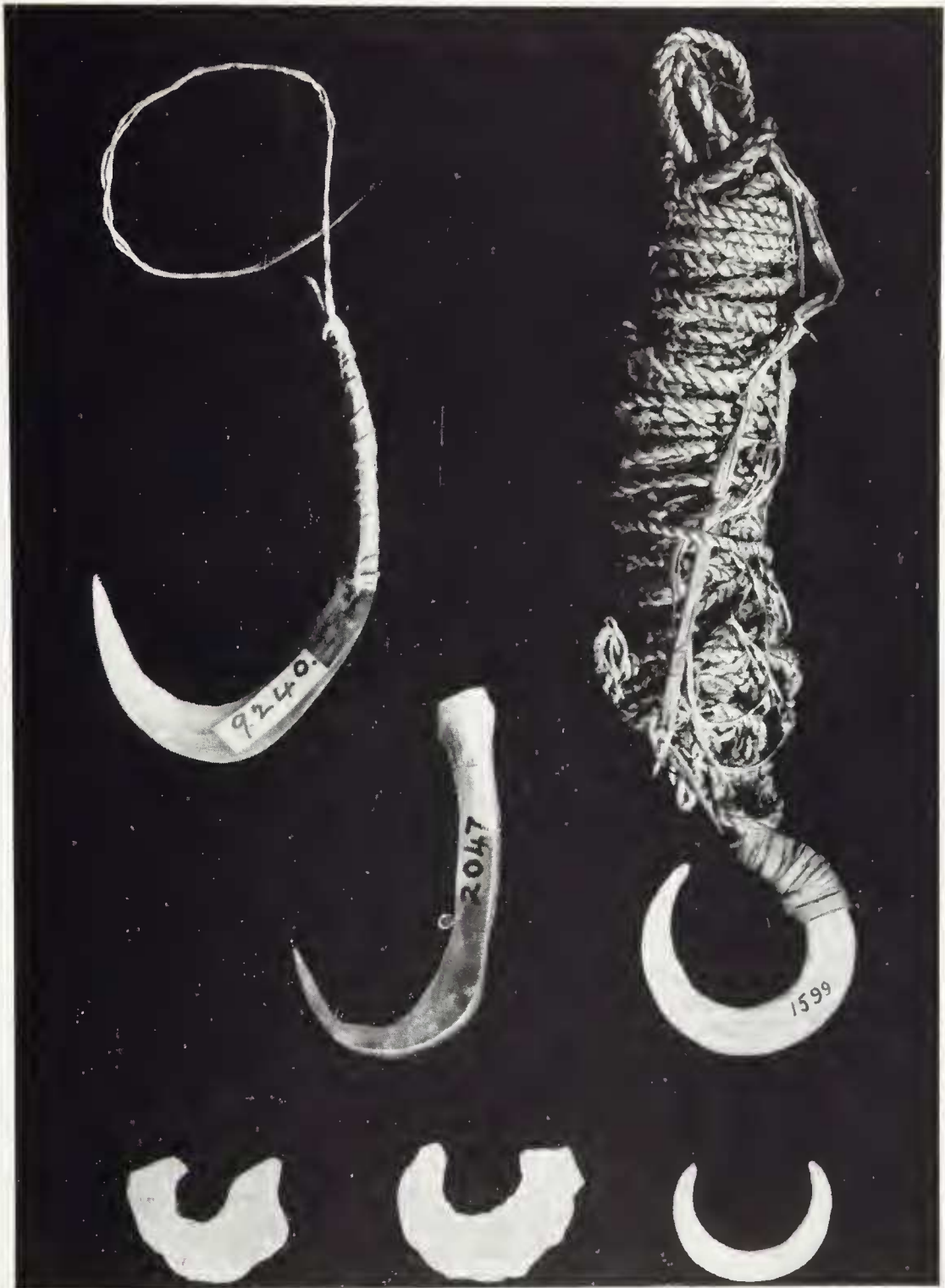


Plate No. 3, Fish Hooks.

Top Row.—No. 9240 made from shell of *Alathyria pertexta*, possibly from Cape Grafton, Q. No. 2047 made from Pawa shell labelled Port Jackson, N.S.W. a forgery. Author's Coll. No. 1599 made from bone. Lake Tyers, V. (All natural size.)

Bottom Row.—Made from shell, *Trochus* sp., one finished and two in the making. Dunk Island, Q. Author's Coll.



natives) catch a variety of other fish, some of which they strike with gigs and some they take with hook and line". Unfortunately he does not record the type of hook used.

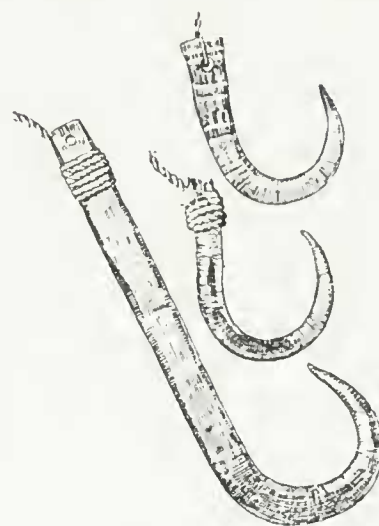
Records of fish hooks from nearby Port Jackson and vicinity are numerous in the diaries of the early settlers. In Hunter's Journals (16), we read—"Their hooks are commonly made from the inside, or mother of pearl, of different shells. The talons of birds, such as those of hawks, they sometime make this use of, but the former are considered the best". And in Phillip's Voyage (21), "Their hooks are made of the inside of a shell resembling pearl shell". Collins (4) states, "Their hooks are made of the mother of pearl oyster which they rub on a stone until it assumes the shape that they want. Though these hooks are not barbed, they catch fish with them with great facility".

Other localities from which shell crescent fish hooks have been recorded are: Keppel Island (Roth (24)), Rockingham Bay (Brough Smyth (28)), Edge-Partington (8)), Dunk Island (Banfield (1)), Tully River (Roth (24)), Cape Grafton (Roth (24)), Barron River (Roth, from Johnstone (25)), Endeavour River (Cook (5)). We may assume that this last locality is the most northerly point from which the crescentic shell fish hook is likely to turn up.

Of the same general type we have records of fish hooks made of turtle shell from Port Bowen (King (17)), Herbert River (Roth, quoting Carraway (24)), and of coconut shell, Keppel Island (Roth (24)). Bowen, Port Denison (specimen in Museum at Florence, Italy). Roth suggests that the shape was derived from the tendrils of *Hugonia Jenkinsii*, which, he says, the natives use on the Lower Tully and at Geraldton (now Innisfail), "indeed, both on the Tully and at Geraldton these hooks have been imitated in shape with iron, telegraph, etc., wire, after bending and filing down". But Banfield (2) doubts this, "but my observations, inquiries and opinion are entirely contrary" to the native using the tendrils. Yet, if they used "the talons of birds" why not the tendrils of plants?

The use of bird talons as fish hooks on the Fly River, New Guinea, was recorded by d'Albertis (6). I have in my private collection a hook which consists of the upper incisor of the long-haired rabbit-rat, *Mesembrionys gouldii*, attached to a long line. It is from north Queensland, but the exact locality is not recorded. Roth (25) also records the use of the "hook" of the lawyer cane (*Calamus* sp.). The thorns of the pandanus are recorded from Hall Sound, New Guinea. This "hook" is also used in the Malay Peninsula and by the Dayaks of North Borneo. I see no reason why the aborigines would think it inferior.

From the tip of Cape York, down the western coast of the Peninsula and along the Batavia, Pennefather and Embley Rivers occurs a turtle shell hook of quite a different shape. It is the shape that was formerly in use amongst the Torres Straits islanders, and possibly was introduced by them along with the bow and arrow, and drum. The method of manufacture of these hooks is simple. In general shape that of a headless pin, it is made by cutting, grinding or scraping a piece of the scutum of a turtle, and bending, by heating, into the shape of a "bent pin". Roth (25) records a similar type of turtle shell hook from the Palm Islands on the eastern side of the Peninsula. This is rather hard to explain, the more so as the natives of the Herbert River on the main-land opposite the islands, are said by the same writer to use the crescentic shape. No doubt the "bent pin" type was a recent importation.



Turtle-shell fish hooks.

### THE COMPOSITE HOOK

The composite hook type is recorded by Roth (24) from Princess Charlotte Bay and the rivers that flow into it. He describes it as "a tapering pencil of hard wood, usually *Erythrophloeum labouchei*, to the attenuated extremity of which is attached, at a very acute angle, a pointed slip of bone. The particular bone utilized is that obtained from the emu, native companion or kangaroo. Its material of attachment is kangaroo tail tendon and Grevillea gum cement. The line, which I have only noted as being manufactured here from *Livistona australis* fibre twine, is attached and fixed by similar means". He also records this type of hook from the Palmer River on the opposite coast, but mentions that sometimes the barbs of the latter are made from spines of the catfish. This type of hook is also recorded, and illustrated, by Spencer and Gillen (30), as from the Alligator River, and specimens are in the National Museum collection from the Victoria and Daly Rivers, in the Northern Territory, in eastern Arnhem Land. The makers of these particular specimens were more versatile in their choice of materials, wooden shank and barb, wooden shank and bone barb, bone shank and bone barb, were commonly used, and sometime twine wrapped around the gum that held the barb in position on the shank.

I was not able to find mention of any similar, or other kind of hook occurring between the Palmer and the Alligator Rivers at the two extremities, one may say, of the Gulf of Carpentaria. Roth (24) reports "at Mornington Island I found a  $1\frac{1}{2}$  in. nail with its extremity ground and bent into a crescent, used as a fish hook". Tindale (32), in his paper on the natives of Groote Eylandt, writes that the present-day hook is an iron nail with the head ground off and finely pointed, and bent abruptly in two places, to form the hook. "The oldest men said they have never used anything else." The indications are that the composite fish hook was disappearing from the Gulf region even before the coming of the white man. It is probable that it ranged along these shores, and on the larger rivers, and was slowly going south, when its progress was stopped by the importation of the "bent-pin" turtle shell hook by the Torres Straits islanders, and the iron nail by the Malays and others.

A similar type of hook, made of palm wood barb tied on to a palm wood shank by means of a neat system of knotting, is known from eastern New Guinea. Some small specimens from Kiriwina, in the Trobriands, are in my private collection, while in the Macleay Museum at the University of Sydney, a large one, fully 7 in. long, is from Collingwood Bay.

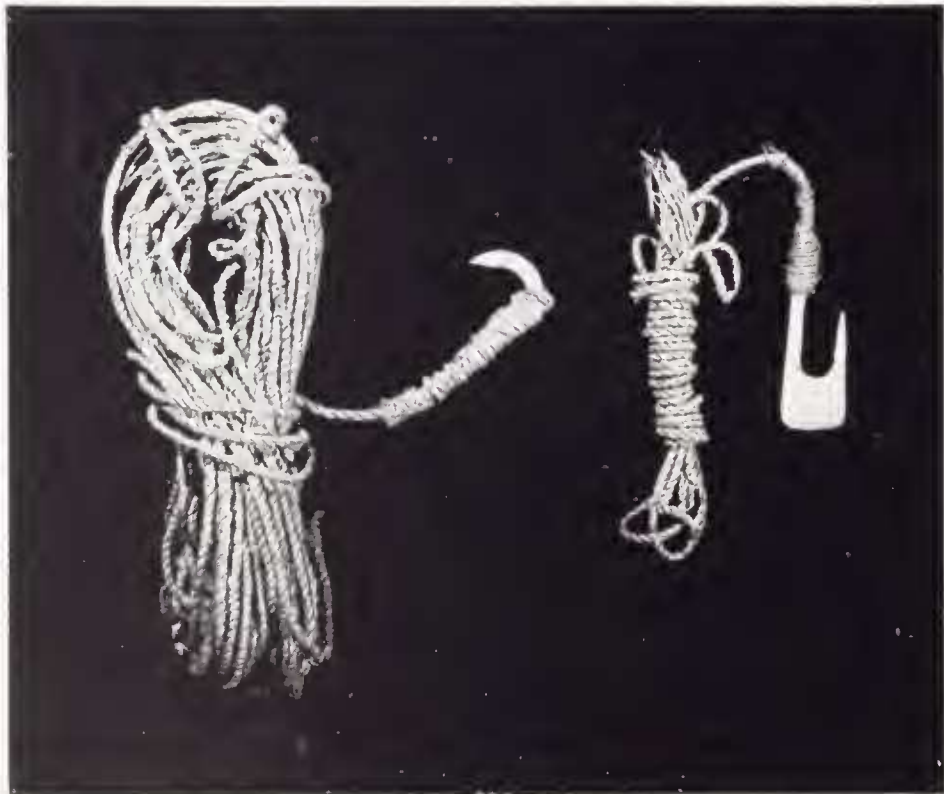


Plate No. 4

*Left.*—Upper incisor of *Mesembriomys gouldii* attached to a long line. North Queensland. Author's Coll.

*Right.*—Daly River Fish Hook, made from mammalian bone, Daly River, N.T. (All half size.)

## THE DALY RIVER HOOK

An additional type, this one a simple hook, occurs in the Daly River of the Northern Territory and its numerous backwaters or billabongs. It was no doubt evolved locally, as it is unlike any fish hook from outside Australia. It was first recorded, and illustrated, by Spencer and Gillen (30): "It is cut out of a solid piece of bone, possibly the femur of a kangaroo. It is considerably flattened, with a fairly sharp point, but



Plate No. 5

*Left.*—Composite fish hook, wooden shank and barb. Daly River, N.T.

*Centre.*—Composite fish hook, bone shank and barb. Victoria River, N.T.

*Right.*—Composite fish hook, palm spine shank and barb. Kiriwina, Trobriand Group, New Guinea. Author's Collection. (Half size.)

there is no attempt to form a barb. The end where the line is attached is slightly expanded, so that when the twine is tied tightly below this it cannot slip off." All the hooks of this type in the National Museum collection are from the Daly River, and as far as I know the type has not been collected from any other locality.

## NATIVE NAMES FOR FISH HOOKS

Very little information is available on this subject. Roth (24) records that the Keppel islanders called the fish hook *ai-ya*, the line *angkun*, and the connecting tea-tree twine *ren*. The Princess Charlotte Bay natives call the fish hook *terwa* in the Koko-wara and *tarubal* in the Koko-rarmul dialects. On the Palmer River the Koko-minni call the fish hook *kora*, and Tindale (32) records *bigangi* for fish hook, by the Ingura of Groote Eylandt. The specimen in the Florence Museum is labelled *minkey*, in the language of the Bendalubber of Port Denison. As already mentioned, Brough Smyth gives *ling'an-ling'an* as fish hook in the language of the Western Port (Victoria) blacks.

## FORGERIES

In a paper of this nature, it is very desirable, but perhaps unexpected, to discuss forgeries. Spurious fish hooks from several parts of the world have been reported. The reason for making these forgeries is not clear, unless it is for gain. I know of one man in Melbourne who will copy such items, but fortunately in such a crude way that his work is easily detected. He calls himself a "Reproducer of things of interest", but never says they are fakes until faced with it, when he says, "Of course I made them. I never sell anything reproduced for genuine".

In the writer's private collection is a fish hook, obtained from a private collector of some repute in Australia. This he purchased many years ago, from a Sydney firm now out of business, but who were, at the time, selling all kinds of ethnological and zoological "curios". The fish hook in question was labelled "Port Jackson". Detection of this forgery was easy because the material of which it was constructed was *Haliotis iris*, the Pawa shell of the New Zealand Maori, and the Maori never made a fish hook of the "Bent Pin" type. The shank was cut from the rim at the edge of the spire and the abrupt curve of the barb part from the adjoining body whorl. Workmanship is very poor, but an attempt had been made to smooth down all the edges, which attempt was only partly successful on the inner edge.

## SUMMARY

The natives of inland Australia, possibly due to the type of country they inhabited, were unacquainted with fish hooks. Indeed there were not many localities in which this method of taking fish could be used. The same cannot be said of the natives inhabiting the coasts of western and southern Australia. They just had no fish hooks.

The natives of coastal South Australia and Victoria, with parts of coastal New South Wales and the Lower Murray River at one time used *muduks*. This system of fishing had gone out by the time the Europeans arrived. *Muduks* are of world wide distribution.

The Tasmanians had no hooks, or even *muduks*.

The people of coastal New South Wales and southern Queensland used a crescentic type of fish hook at the time of the first contacts. It was slowly going south. This type of hook could have been imported from Melanesia. It is very similar to a Polynesian (Tahiti) form.

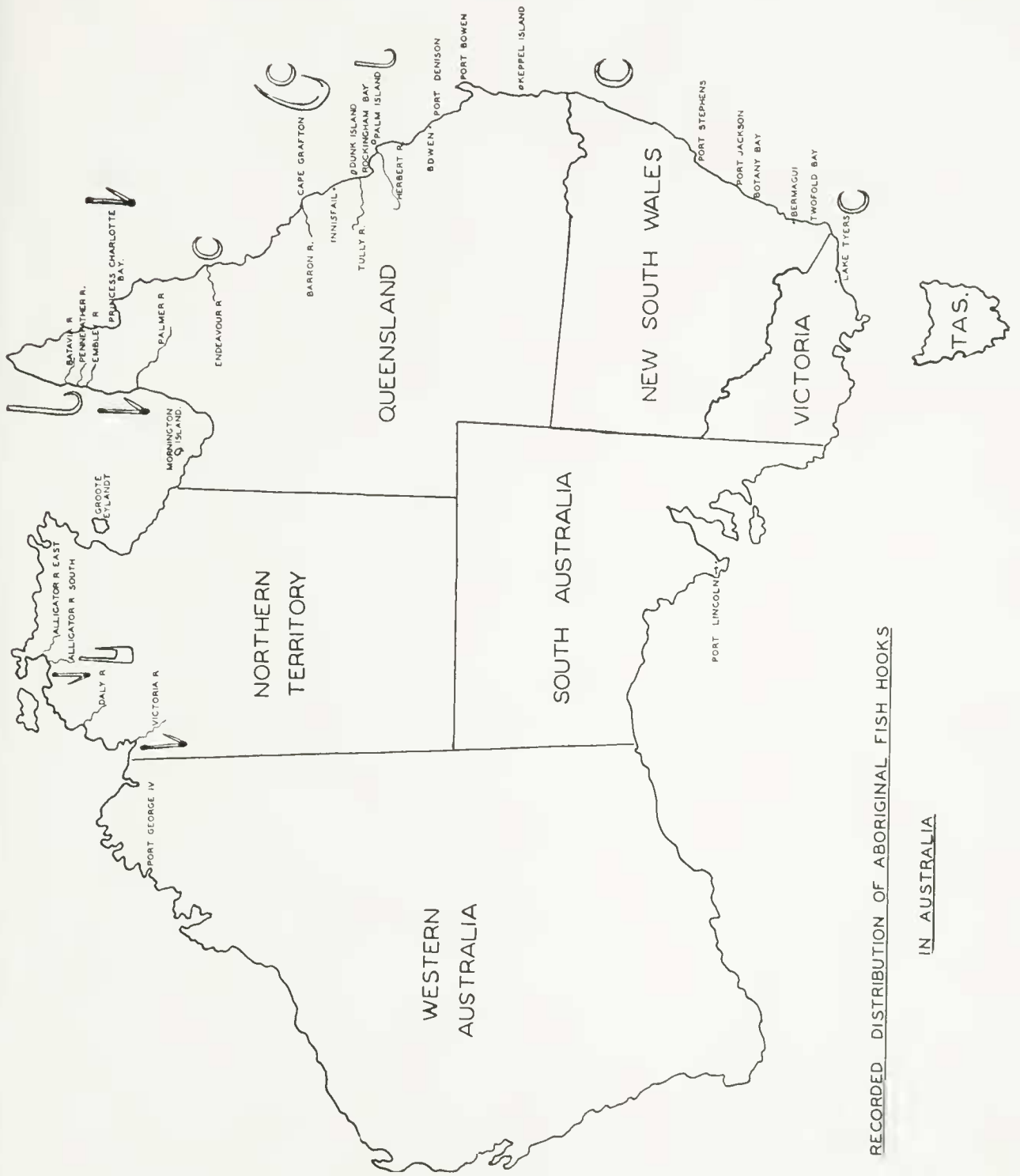
The Northern Territory and Northern Queensland natives used a composite hook, which was slowly making its way towards the south-east, probably because of its greater ease of manufacture. This hook may have been an early importation from New Guinea. In turn it was being displaced in the Gulf of Carpentaria by the bent pin type of turtle shell hook from the Torres Straits, and the iron nail hook from Indonesia, both of which were easier still to make.

An isolated type of simple hook was used by the Daly River natives. This type probably evolved locally from the composite hook. The natives of Cape Grafton, and possibly other localities in southern Queensland, also made a hook from the shell of a fresh water mussel. Probably due to the different material used, this type was very unlike the crescentic, but similar to the "Bent Pin". It must also have evolved locally.

A spurious "Bent Pin" from Port Jackson is described as a warning that fakes exist even in fish hooks.

## REFERENCES

1. Banfield, E. J., "Confessions of a Beachcomber". 1908.
2. — Qd. geogr. J. Vol. XXIV. 1908-9.
3. Codrington, R. H., "The Melanesians." 1891.
4. Collins, D., "An Account of the English Colony in New South Wales," 1802.
5. Cook, Capt. J., in Hawkesworth's "An Account of Voyages, etc." 1773.
6. d'Albertis, L. M., "New Guinea". 1880.
7. Dawson, J., "Australian Aborigines." 1881.
8. Edge-Partington, J., "Ethnographical Album of the Pacific Islands." 1st Ser. Vol. 2, p. 354. 1890.
9. Eyre, E. J., "Discoveries in Central Australia." 1845.
10. Grey, Capt. G., "Travels in North-West and West Australia." 1837.
11. Hale, H. M., and Tindale, N. B., Rec. S. Aust. Mus. IV. 1930.
12. Hamilton, A., N.Z. Dom. Mus. Bull. 11. 1908.
13. Haydon, G. H., "Five Years Experience in Australia Felix." 1846.
14. Hiekkson, S. J. A., "A Naturalist in North Celebes." 1889.
15. Howitt, A. W., "The Native Tribes of South East Australia." 1904.
16. Hunter, J., "An Historical Account of the Transactions at Port Jackson," etc. 1793.
17. King, Capt. P. P., "Narrative of a Survey of the Intertropical and Western Coasts of Australia." 1827.
18. Love, J. R. B., "Stone Age Bushmen of To-day." 1936.
19. Meyer, Rev. A., in Wood's "Native Tribes of South Australia." 1879.
20. McCarthy, F. D., Rec. Aust. Mus. XX. 1940.
21. Phillip, A., "The Voyage of Governor Phillip to Botany Bay, etc." 1789.
22. Ross, L. C., Masterkey, Vol. 28, pt. 4, pp. 151-154.
23. Roth, H. Ling, "The Aborigines of Tasmania." 1889.
24. Roth, W. E., North Queensland Ethnography, Bull. 3. 1901.
25. — N. Qd. Ethnogr. Bull. 7. 1904.
26. — "The Arts and Crafts of the Indians of Guiana" in 38th Ann. Rep. Bur. Amer. Ethn. 1916-17.
27. Schürmann, Rev. C. W., in Wood's "Native Tribes of South Australia." 1879.
28. Smyth, R. Brough, "The Aborigines of Victoria." 1878.
29. Sollas, W. J., "Ancient Hunters." 1915.
30. Spencer, W. B., and Gillen, F. J., "The Northern Tribes of Central Australia." 1904.
31. Taplin, Rev. G., in Wood's "Native Tribes of South Australia." 1879.
32. Tindale, N. B., Rec. S. Aust. Mus. VIII. 1925-6.
33. Thorpe, W. W., Rec. Aust. Mus. XVIII. 1932.



RECORDED DISTRIBUTION OF ABORIGINAL FISH HOOKS  
IN AUSTRALIA